

Performance Measurement Checklist:

A procedure to accomplish Step 8 of the NOAA Performance Management Logic Model

Purpose of Checklist:

1. To provide a logical, step-by-step procedure to (1) evaluate the utility of existing performance measures; (2) develop new performance measures, if necessary; and (3) generate valid performance measure statements.
 - ✓ This procedure should be used to evaluate existing performance measures, as suggested in Serial 4 of the Program Baseline Assessment guidance.
 - ✓ Conceptually, this procedure can be applied at any level of the NOAA Measurement Pyramid. However, it has not yet been extensively applied at the Goal level.
2. To guide discussion and deliberations that provide input to producing the documentation (i.e., metadata) required for valid performance measurement statements.

Remember ...

The intent of developing performance measures is to help improve organizational delivery of service. It is not an exact science. Therefore, performance measures should be based on the best professional judgment of the program manager.

Things you need to start the checklist:

1. Requirement and capability/capacity analysis (**This information should be available from the Baseline Assessment**)
 - *Describe the capability:* Fully understand the capability, including (1) the applicable mission goal and functional theme, (2) the critical, apex objective(s) of the capability and (3) the relevant outcome/output(s). Record the point of contact for the capability in the metadata.
 - *Determine frame of reference:* Identify the frame of reference: Goal, Program, Program Component, or Activity (see Performance Measurement Pyramid). Identify the audience for the associated performance measure(s), for example, program managers, NOAA management, and/or the general public.
2. NOAA Performance Management Logic Model
3. NOAA Measurement Pyramid
4. NOAA Performance Management Definitions
5. List of existing performance measures related to the capability

Capability

A formulation of expertise and technology to meet a requirement. The term applies regardless of number and breadth of individual skills incorporated within the capability.

Performance Measures By the Steps

See Figure 1. Steps 1 to 3 serve to “screen” prospective performance measures – leading to a decision to KEEP, MODIFY, or DROP them from further consideration. In this process, however, program managers might identify key performance measures, unsupported by currently available data, which they may choose to ADVOCATE FOR SUPPORT for collecting the necessary data. In other instances program managers may want to DEVELOP NEW or additional performance measures for the capability. Steps 4 and 5 serve to develop the final components of a valid performance measure – the baseline and target.

Step 1: Identify Best Indicator

- ID candidate indicators: Using the compilation of existing performance measures as a resource, identify one or more good candidate indicators for the capability.
- Evaluate indicators: Write or discuss a brief description explaining why or how the indicator is one of the best gauges for tracking progress for this capability (i.e., what is the basis for using this indicator?). Specifically evaluate the indicator against the following criteria:

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| <i>Measurable</i> : Is it measurable? If so, how would you measure it? (be specific) |
| <i>Sensitive/responsive</i> : Will the indicator change over time and in response to implementation of the program/organization? |
| <i>Realm of control</i> : Is it within the manageable interest of the capability, i.e., do you have direct or near direct control over this indicator, or is it significantly affected by external factors? If so, list the major factors. |
| <i>Meaningful</i> : Is it meaningful to and understandable by evaluators and/or constituents (i.e., the audience)? |

- Select indicator(s): Based on the above evaluation, identify best indicator(s). Quality is more important than quantity.

Document your results. By using or modifying existing performance measures, or developing new ones, move on to Step 2 with the best indicator(s).

Step 2: Feasibility Analysis

- Evaluate indicator(s): Evaluate each indicator against the following criteria:

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| <i>Data availability</i> : Are supporting data available – that is, are they existing and available, readily synthesized from existing sources, or readily generated? If yes, record the specific data contact. |
| <i>Frequency of data collection</i> : Are data collected at a frequency to support reporting at appropriate time scales (e.g., annually)? |
| <i>Spatial extent of data collection</i> : Are data collected within an appropriate geographic area to support reporting at appropriate special scales? |

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| <i>Continued data collection:</i> Will supporting data continue to be collected into the future at adequate frequency and spatial extent? |
| <i>Supports an acceptable baseline:</i> Does this dataset support establishment of an acceptable baseline? |
| <i>Overall implementation cost:</i> What is the estimated cost of collecting and synthesizing associated data, and measuring and reporting on this indicator? Can we do a quick cost/benefit summary? |

Document your results. Move on to Step 3 if supporting data are available or if it is feasible to compile or generate appropriate data (KEEP). If not, document this fact and (a) MODIFY the indicator, if possible; (b) DROP this indicator from further consideration; or (c) consider other good indicators at Step 1 (DEVELOP NEW). Alternatively, if a currently unsupported indicator is the best, the program manager may want to ADVOCATE FOR SUPPORT for collecting the necessary data.

Step 3: Reporting Analysis

- Analyze indicator(s): Identify and analyze the prospective reporting format for each indicator:

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| <i>Unit of measure:</i> Identify the specific unit of measure (metric). Is it appropriate to the indicator? Verify that the supporting data are available in this specific unit of measure. |
| <i>Reporting frequency:</i> Identify how frequently this indicator should be reported. |
| <i>Reporting format:</i> Identify how the indicator will be measured and reported, that is, identify the display format (for example, identify the axes of the graph or the polygons on a map). Verify that this reporting format is meaningful to the intended audience. |

Document your results. If the analysis in Step 3 reveals an appropriate unit of measure and reporting frequency and format, CONGRATULATIONS! You have identified a measurable indicator for your performance measure (KEEP) – move on to Step 4. If not, document identified roadblocks and (a) MODIFY the indicator, if possible; (b) DROP this indicator from further consideration; or (c) consider other good indicators at Step 1 (DEVELOP NEW).

Step 4: Determine Baseline

- *Baseline date and level:* What is the baseline date and level? Document the rationale or basis for selecting this baseline date and level.

Document your results. Move on to Step 5.

Step 5: Determine Target

- *Target date and level:* What is the target date and level? Document the rationale or basis for selecting this target date and level.
- *Appropriate target:* Is this a reasonable and worthwhile target to achieve, based on the requirement and outcome? Too easy? Too ambitious?

Document your results.

Guiding Principles for Crafting Performance Measure Statements

Craft a structured statement describing how progress will be evaluated. The statement should include the following four parts. The structure of the performance measurement statement remains the same regardless of the frame of reference.

- **Indicator** – the attribute or characteristics used to evaluate the outcome of a capability/activity; the “thing” measured
- **Unit of Measure** – (a.k.a., metric) the statistic or way the indicator is reported
- **Baseline** – the final level to be reached in a defined time period
- **Target** – the initial level of measurement started at a defined time

EXAMPLE

Goal 3: Weather and Water

NWS Tropical Storms Program

Decrease the 48-hour track error for tropical storms from 130 nm in FY03 to 126 nm in FY08.

- Indicator: 48-hr track error for NWS-tracked tropical storms
- Unit of Measurement: nautical miles (nm)
- Baseline: 130 nm (2003)
- Target: 126 nm (2008)

Also, in crafting performance measure statements:

- Quality is more important than quantity.
- Use consistent terminology (refer to NOAA Performance Measurement Definitions).
- Use only one indicator per performance measure statement.
- Where appropriate, include user and constituent input and perspective (i.e., consider the audience).
- Generate and maintain a metadata file for each performance measure that records the results of proceeding through the Checklist.
- Each performance measure should be subject to quality assurance review prior to reporting.

Figure 1.

Performance Measures By the Steps

